

**REMARKS**

Claims 1-25 were originally filed in the present application.

Claims 1-25 are pending in the present application.

Claims 1-25 were rejected in the March 9, 2005 Office Action.

Claims 1 and 10 have been amended.

Reconsideration of the claims is respectfully requested.

In the March 9, 2005 Office Action, the Examiner made a final rejection of Claims 1-5, 10-13 and 18-21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,907,582 to *Yi* (hereinafter, simply "*Yi*").

The Applicant has amended independent Claims 1 and 10 of the present application in order to more particularly point out and distinctly claim the Applicant's invention. The Applicant directs the Examiner's attention to Claim 1, which contains the unique and novel limitations emphasized below:

1. For use in a digital data communications system, an apparatus for use as a channel encoder comprising:
  - a first Turbo encoder capable of Turbo encoding data, having an output;
  - an interleaver unit having an input coupled to said output of said first Turbo encoder, said interleaver unit capable of interleaving Turbo encoded data from said first Turbo encoder, and said interleaver unit having an output; and
  - a second Turbo encoder having an input coupled to said output of said interleaver unit, said second Turbo encoder capable of Turbo encoding interleaved data from said interleaver unit. (*Emphasis added*).

The Examiner cites *Yi*, Claim 16, in rejecting Claim 1, correctly summarizing the claim as disclosing "a digital communication system comprising first turbo encoder for turbo encoding digital

source information, an interleaver for interleaving the digital source information, [and] a second turbo encoder for turbo encoding the interleaved digital source information.” *Office Action mailed March 9, 2005, Section 2, second paragraph.* However, per MPEP § 2131, anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. Claim 16 from the *Yi* reference does not recite an interleaver with an input coupled to an output of a turbo encoder, and therefore cannot anticipate Claim 1 of the present application, as amended.

Thus, amended independent Claim 1 contains unique and novel limitations that are not disclosed, suggested or even hinted at in the *Yi* reference. Also, Claims 2-5 depend from Claim 1 and contain all of the unique and novel limitations recited in Claim 1. This being the case, Claims 1-5 are patentable over the *Yi* reference.

The Applicant notes that amended independent Claim 10 contains limitations analogous to the unique and novel limitations recited in amended Claim 1. Also, Claims 11-13, which depend from Claim 10, contain all of the unique and novel limitations recited in Claim 10. This being the case, Claims 10-16 are patentable over the *Yi* reference.

The Applicant directs the Examiner's attention to Claim 18, which contains the unique and novel limitations emphasized below:

18. For use in a digital data communications system comprising a channel encoder, a method of operating said channel encoder comprising the steps of:  
encoding data with a first Turbo encoder;  
interleaving Turbo encoded data from said first Turbo encoder with a first interleaver unit; and  
encoding interleaved data from said first interleaver unit with a second Turbo encoder. (*Emphasis added*).

The Examiner cites *Yi*, Claim 16, in rejecting Claim 18. As discussed above, Claim 16 of the *Yi* reference recites a first turbo encoder that encodes digital source information into a first code sequence, and an interleaver, in parallel with the first turbo encoder, that interleaves the same digital source information. As such, the Applicant respectfully submits that Claim 16 of the *Yi* reference does not teach a method comprising the step of interleaving turbo encoded data from a first turbo encoder, as recited in Claim 18 of the present application.

Thus, independent Claim 18 contains unique and novel limitations that are not disclosed, suggested or even hinted at in the *Yi* reference. Also, Claims 19-21 depend from Claim 18 and contain all of the unique and novel limitations recited in Claim 18. This being the case, Claims 18-21 are patentable over the *Yi* reference.

In the March 9, 2005 Office Action, the Examiner rejected Claims 6-9, 14-17 and 22-25 under 35 U.S.C. §103(a) as being unpatentable over the *Yi* reference in view of U.S. Patent No. 6,397,367 to *Park et al.* (hereinafter, simply "*Park*").

The Applicant traversed this rejection in the reply filed May 2, 2005, however the Examiner made no response to the Applicant's arguments in the Advisory Action mailed August 9, 2005. The Applicant reiterates those arguments below and respectfully requests the Examiner's consideration.

The Examiner concedes that *Yi* does not teach multiplexing the data output by the first and second turbo encoders. Applicant argued and demonstrated in response to the Office Action mailed July 2, 2004, that the proposed modification of the *Yi* system by the teaching of the *Park* reference — multiplexing the uninterleaved output of the first turbo encoder with the interleaved output of the second turbo encoder prior to transmission — would defeat a feature of the system that the *Yi* reference describes as providing "significantly improved performance." *See Yi, col. 3, lines 21-29.* As such, the *Yi* reference actually teaches away from the proposed combination.

The Examiner's response, in the final Office Action, is that by teaching a first broadcast signal of uninterleaved data and a second broadcast signal of interleaved data, "*Yi* is basically teaching the same system as the applicant's invention." *Office Action mailed March 9, 2005, page 3, second paragraph.* On the contrary, the Examiner's summary reinforces that *Yi* teaches away from adding a multiplexer. The response correctly characterizes *Yi* as sending the uninterleaved and interleaved data on separate broadcast signals and, therefore, without being multiplexed into a single signal. Thus, *Yi* teaches away from any combination or modification to add a multiplexer as

proposed by the Examiner, and the Applicant respectfully submits that any such modification would defeat the objects of *Yi*'s system, and render *Yi*'s system inoperable.

As the Office Action has not (and indeed cannot) show a proper motivation to modify *Yi* or combine it with *Park* to produce the claimed inventions, claims 6-9, 14-17 and 22-25 should be allowed over all art of record.

**SUMMARY**

For the reasons given above, the Applicant respectfully requests reconsideration and allowance of pending claims and that this Application be passed to issue. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *jmockler@davismunck.com*.

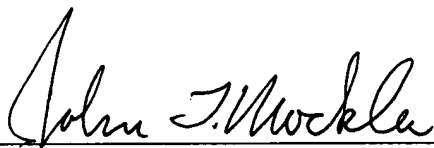
The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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